Amendments to the Drawings:

The attached replacement drawing sheets make changes to Figs. 3, 4A and 4B and replace the original sheets with Figs. 3, 4A and 4B. The Figures have been amended to recite a legend "Prior Art". It is respectfully requested that the amended figures be entered.

Attachment: Replacement Sheets

REMARKS

Claims 3 and 9-12 are pending in this application. By this Amendment, claims 9-12 are added, the drawings and claim 3 are amended, and claims 1, 2 and 4-8 are cancelled without prejudice to or disclaimer of the subject matter contained therein. No new matter has been added. Reconsideration of the application is respectfully requested.

The drawings are objected to for failing to identify Fig. 3 as "prior art". Figs. 3, 4A and 4B have been amended to recite a legend "prior art" responsive to the objection. It is respectfully requested that the objection be withdrawn.

Claims 1-5 and 7 are rejected under 35 U.S.C. §112, second paragraph as being indefinite. Specific language in claims 1, 4 and 7 was identified as forming the basis of the rejection. The rejection of claims 1, 2, 4, 5 and 7 has been rendered moot by the cancellation of these claims and the rejection of claim 3 has been rendered moot in view of new claim 9, from which claim 3 depends. It is respectfully requested that the rejection be withdrawn.

Claims 1, 3-4 and 6-8 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 6,058,407 issued to Kim, and claims 1, 3-4 and 6-8 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,050,119 to Lish. The rejections of claims 1, 4 and 6-8 have been rendered moot by the cancellation of claims 1, 4 and 6-8. The rejections of claim 3 are respectfully traversed because it depends from claim 9. New independent claims 9 and 12 are patentable over the applied references for at least the following reasons.

Kim discloses shift registers 201A-201D which receive data to shift, multiplexers 202A-202D which choose each data from the shift registers, and a tab coefficient generating section 203 (col. 3, lines 1-10) with 31 tab coefficients, 15 of which are zero (Fig. 5). The tab coefficients which are zero delay the processing time of the filter (col. 3, lines 28-30). As shown in Fig. 7, four tab coefficients are applied to the input terminal of four multiplexers and more particularly, only four odd (nonzero) tab coefficients are applied (col. 3, lines 51-61) so

as to reduce processing needs by not applying the tab coefficients which are equal to zero. Thus, in the FIR filter disclosed in Kim, the regularity of the data and coefficient selections are not related to the data signal, and all the data constituting the data signal is selected and operated on (multiplied). Nowhere does Kim disclose or suggest eliminating unnecessary calculation based on the repeating sequence of the data signal, for example.

Lish also fails to disclose a digital filter whose data and coefficient selections are carried out based on the repeating sequence of the data signal. Lish discloses a digital filter in which a predetermined reference signal in the transmitted video signal and an identical reference signal generated in a ghost cancellation circuit are used to identify optimum active multiplier positions and values during a vertical retrace interval (col. 1, lines 31-36).

For at least these reasons, Applicant submits that Kim and Lish fail to disclose all the features of claim 9 including, *inter alia*, a digital filter for extracting a frequency component by multiplying a plurality of data constituting a data signal in which at least one "0" is inserted so as to carry out zero value interpolation by a plurality of coefficients, comprising a first selection section to select one data other than the inserted "0" from the plurality of data included in the data signal, wherein the first selection section selects one data each time the data signal is shifted, the second selection section selects one coefficient each time the data signal is shifted, and the first selection section selects the one data according to a first predetermined repeating sequence and the second selection section selects the one coefficient according to a second predetermined repeating sequence.
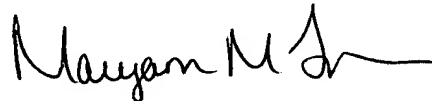
For at least the reasons discussed above, Applicant submits that Kim and/or Lish fails to disclose or suggest all of the features of claim 9, from which claim 3 depends. It is respectfully requested that the rejection be withdrawn. Claim 12 is patentable for reasons similar to claim 9.

Claims 2 and 5 are rejected under 35 U.S.C. §103(a) over either Kim or Lish, in view of U.S. Patent No. 4,660,216 issued to Claasen et al. (hereinafter "Claasen"). The rejections of claims 2 and 5 have been rendered moot by the cancellation of claims 2 and 5. It is respectfully requested that the rejections be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of all pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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WPB:MMI/ccs

Attachment:
    Replacement Sheets for Figs. 3, 4A and 4B.

Date: October 4, 2004

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